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OF THE
T R O G O N I D Æ,
OR
T R O G O N S.

BY
JOHN GOULD, F.R.S., &c.

TO BE COMPLETED IN FOUR PARTS.

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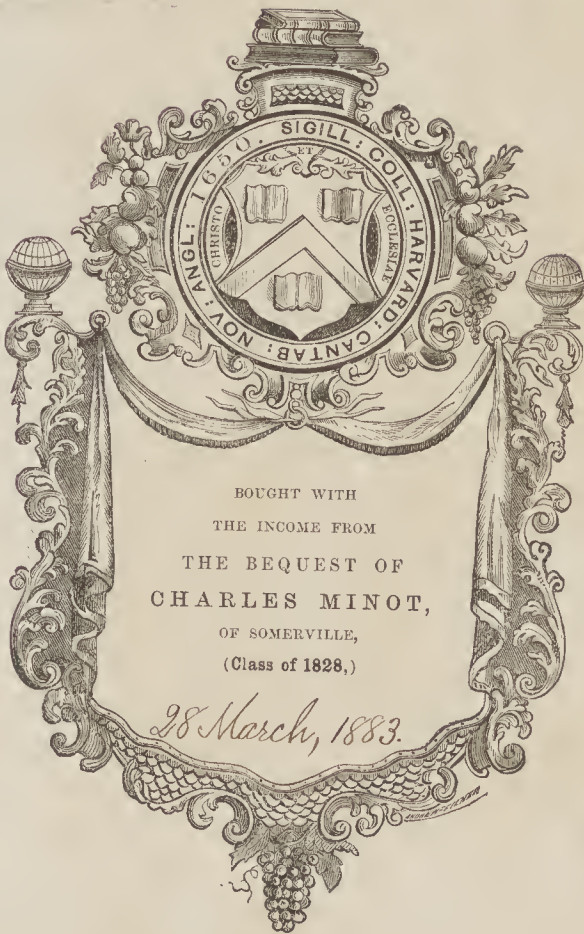
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PHAROMACRUS PAVONINUS.

PHAROMACRUS PAVONINUS.

Red-billed Train-bearer.

SPECIFIC CHARACTER.

Mas. *Rostro ad basin miniaceo, ad apicem flavo ; caudâ nigrâ.*

Male.—Head and breast glossy green in some specimens, rich golden green in others ; wings and the whole of the upper surface rich glossy green ; upper tail-coverts green, the two centre ones reaching to the end of the tail, but rarely exceeding it ; wings and tail black ; breast and under tail-coverts rich scarlet ; feathers of the thighs and tarsi black with green reflections ; irides dark red inclining to carmine ; feet ochre-yellow ; bill carmine at the base and yellow at the tip.

Total length $13\frac{1}{2}$ inches, *bill* $1\frac{1}{4}$, *wing* $7\frac{1}{2}$, *tail* 7.

Female.—Head, throat, and chest dark greyish brown, tinged with green ; upper part of the abdomen dark greyish brown, the lower part and the under tail-coverts deep scarlet ; feathers of the thighs and tarsi black with green reflections ; shoulders and the whole of the upper surface including the upper tail-coverts, which nearly reach to the end of the tail, rich green ; wings brownish black with the outer edges of the feathers buff ; tail-feathers black, the two outer on each side obscurely rayed with greyish white ; upper mandible dark brown, under mandible dusky carmine becoming brown at the point ; irides brown.

Trogon pavoninus, Spix, Av. Bras., tom. i. p. 47, tab. xxxv.—Steph. Cont. of Shaw's Gen. Zool., vol. xiv. part 1, p. 219.—Gould, Proc. of Zool. Soc. 1833, p. 107, 1835, p. 29, & 1836, p. 12.—Id. Mon. of Trog., pl. 23.

Calurus pavoninus, Swains. Class. of Birds, vol. ii. p. 338.—Gray, Gen. of Birds, vol. i. p. 71, *Calurus*, sp. 2.—Bonap. Consp. Gen. Av., tom. i. p. 293, *Calurus*, sp. 2.—Burm. Syst. Uebers. Th. Bras., tom. ii. p. 273, & *ibid.* note sp. 3.

Tanypeplus pavoninus, Cab. et Heine, Mus. Hein., Theil iv. p. 205.

Pharomacrus pavoninus, Sclat. and Salv. Proc. of Zool. Soc. 1867, p. 583.

If ornithologists will examine and compare my figures of the various species of this truly beautiful section of the *Trogonidæ*, they will perceive at a glance that the characters of each are so clearly defined that but little attention will be required to distinguish one from another. The bird here represented is the only species of the form that has yet been discovered with a red bill ; if, then, this peculiarity be kept in view, and the uniform brownish-black colouring of the tail be remembered, the bird will be readily recognized. Its native country is the interior of Brazil, where it inhabits most, if not all, the great primæval forests bordering the rivers of that extensive region, but more particularly those which flow into the mighty Amazon. Spix was the first who made us acquainted with this fine bird by his figure of it on the thirty-fifth Plate of the first volume of his work on the Birds of Brazil. The late John Natterer brought specimens with him when he returned from his sojourn of eighteen years in the same country, kindly leaving with me a male and a female when passing through London *en route* to Vienna. He at the same time informed me that he had had

frequent opportunities of observing the bird in a state of nature among the great woods bordering upon the upper parts of the Amazon and the Rio Negro, where it is only seen among the highest branches. Since that period examples have been brought to England by Mr. Wallace ; and I possess a beautiful specimen obtained by Mr. Hauxwell at Chamicuros. Upon examining the contents of the stomach, Mr. Natterer almost invariably found it to consist of the fruit of a certain species of palm ; he therefore concluded that this, together with various berries and stoned fruits, forms its subsistence. It arrives in the localities above mentioned when its favourite fruit is ripe ; and when the trees no longer yield an adequate supply retires again to other districts.

To Mr. Wallace I am indebted for the following notes, which cannot fail to be of interest to all who admire this fine family of birds :—The *Pharomacrus pavoninus* “ inhabits the virgin forests of the higher and dry lands, and is never seen in low woods or among the trees growing on the flooded grounds ; but it sometimes visits the plantations to feed on fruit, particularly the soft berries, about the size of currants, of the different species of *Melastoma*, the juice of which imparts a purple hue to their stomachs. These fruits are always taken when the bird is on the wing. The bird usually sits quietly among the branches until hunger impels it to dash out, whirl round the tree, and seize its food in its passage ; it likewise feeds on insects, which are also taken on the wing, the bird darting after them and returning to the same branch in the manner of a Flycatcher. The cry of this species is very peculiar, and different from that of the other Amazonian Trogons ; it consists of two notes sufficiently loud to be heard a long way off. The Indians ascertain the whereabouts of the bird by imitating this cry, which it immediately answers. On ascending the Amazon the bird was first noticed about the mouth of the Rio Negro, and became more plentiful on the upper part of that river ; it was actively engaged in the search after insects about sunset, but was not seen to be thus engaged after darkness had set in.”

The Plate represents the two sexes, of the natural size. The Plant is the *Eugenia Brasilensis*.

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PRIONOTELUS TEMNURUS .

J. Gould & H.C. Richter del. et lith.

Walter. Imp.

PRIONOTELUS TEMNURUS.

Cuban Trogon.

SPECIFIC CHARACTER.

Mas. *Dorso alisque viridibus, harum secundariis ad apicem albo latè unifasciatis, remigibus nigris albo fasciatis; rectricibus intermediis sex viridibus, ad apicem (pogoniis expansis) latè emarginatis, reliquis ad basin viridibus, in medio fasciâ albâ alterâque viridi notatis, ad apicem latè albis.*

The whole of the head and ear-coverts deep glossy steel-blue; back, lesser wing-coverts, and upper tail-coverts shining bronzy green; throat and breast light grey; lower part of the abdomen and under tail-coverts scarlet; greater wing-coverts and secondaries black, margined externally with green and crossed near the tip with a broad bar of white forming two conspicuous bands; spurious wing black barred with white; primaries black, the outer one barred on the basal half of the external web with white; the remainder with a line of white on the basal portion of the outer web, the remaining part of the web being barred with white nearly to the tip; two middle tail-feathers bronzy green passing into deep steel-blue at the tip; the two next on each side deep steel-blue washed with green on their outer margins; the three lateral feathers on each side steel-blue at the base, largely tipped with white, the white extending nearly to the base on the outer web of the external feather; the next two barred with white on the dark portion of the outer web; the white tips of the three lateral feathers on each side are, moreover, very finely sprinkled with brown on the margin of the outer web and on the basal portion of the inner web; bill blood-red, with a broad mark of black on the culmen; feet brown.

Total length $10\frac{1}{2}$ inches, *bill* 1, *wing* 6, *tail* $6\frac{1}{4}$.

Trogon temnurus, Temm. Pl. Col., 326.—Vig. Zool. Journ., 1827, p. 443.—Less. Traité d'Orn., p. 120.—Gould, Mon. of Trog., pl. 19.—D'Orb. in Ramon de la Sagra's Hist. Phys. Pol. et Nat. de l'île de Cuba, p. 165, Atlas, tab. xxvi.

Temnurus albicollis, Swains. Class. of Birds, vol. ii. p. 337.—Gould, Mon. of Trog., syn. spec. *Temnurus*, sp. 1.

Trogon (Temnurus) albicollis, Gould, Mon. of Trog., List of Plates, sp. 19.

Prionotelus, Reichenb. Av. Syst. Nat., pl. lxxxviii.

Priotelus temnurus, Gray, List of Gen. of Birds, p. 10.—Id. Gen. of Birds, vol. i. p. 70.—Bonap. Consp. Gen. Av., tom. i. p. 150.—Cab. Journ. für Orn., 1856, p. 106.

"*Temnurus silens*, Herz. Würtemb.," Hartl. in Naumannia, 1852, part ii. p. 51.

Prionotelus temnurus, Cab. et Heine, Mus. Hein., Theil iv. p. 164.

THIS Trogon is conspicuously different in form, markings and coloration from every other known species; its most striking features are the broad barring of its wings, and the very singular form of the extremities of the tail-feathers. Its native country is Cuba, where it appears to be so common as to be frequently killed

and used as an article of food ; how few, however, of the collections of Europe possess examples, and how rarely is it seen among the skins of birds which are tardily sent from its native country !

In the first edition of this Monograph I observed, "Upon looking at the markings of the wing, we cannot fail to be struck with their resemblance to those on the same part of several of the Woodpeckers ; the peculiar termination of the tail also, together with its more attenuated bill, are features equally conspicuous, yet these must be considered as relations of analogy and not of affinity." Still, if my memory serves me correctly, I have been informed that the bird sometimes clings to the boles of trees in the manner represented by one of the reduced figures in the accompanying Plate ; as, however, I cannot give my authority for this remark, it must be received with a degree of doubt ; at the same time the structure of its tail-feathers would almost induce the belief that it, at least occasionally, indulges in such a habit. I give below all the information that has been published respecting this species, and only regret that neither Duke Paul Wilhelm von Württemberg, nor Señor Ramon de la Sagra states if there be or be not any difference in the colouring of the sexes, a point I have not been able to determine from the examination of specimens ; neither do they give any information respecting the nidification &c.

In the zweiten Bandes zweites Heft of the 'Naumannia' for 1852, p. 51, Dr. G. Hartlaub says, "In the year 1824, the Duke Paul Wilhelm von Württemberg brought the first specimen of *Trogon temnurus* of Temminck to Europe. The Duke says, 'I then proposed for it the name of *Temnurus silens*, but was dissuaded from splitting the genus *Trogon*. It is a stupid bird, is called *Serpentaro* by the Creoles, allows people to get nearer to it than the *Arriero* (*Saurothera Merlini*), sits for days lazily on the branches of low trees, and utters a melancholy sound.'"

M. Ramon de la Sagra, in his 'Histoire Physique, Politique et Naturelle de l'île de Cuba,' informs us that "this Trogon, one of the most brilliant members of its family, has only yet been met with in the island of Cuba, of which it is not the least beautiful ornament. It is very common in the woods, its favourite place of abode ; and there in the evening, but especially in the morning, its plaintive song may be heard repeated at lengthened intervals. The first portion of the note is higher and louder than the remainder, and is most readily imitated with a horn. It is this habit of uttering its song at the commencement and the close of day that has induced the Guaranis of Paraguay to say, in reference to another species, that it cries in the morning for the sun to rise, and in the evening because it is setting. Dwelling solitarily in the large woods, it perches principally on the lower branches of the trees, and there remains immoveable for hours together, apparently asleep, or at least indifferent to what is going on around it ; it is therefore easily shot, and many are killed for the table, its flesh being well flavoured. It lives solely on small seeds, a kind of food apparently incompatible with the form of the bill, which would seem to be better adapted for an insectivorous than a granivorous diet. Its native name, in Cuba, is *Tocororo*."

The front figure represents the bird of the size of life ; the fine palm to the fruit of which it is clinging is the *Astrocaryum rostratum*.

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TROGON ELEGANS, Gould.

J. Gould & H. C. Richter, del. et lith.

Walter Imp.

TROGON ELEGANS, *Gould.*

Graceful Trogon.

SPECIFIC CHARACTER.

Mas. *Facie, capite anticè, auribus guttureque nigris; alis brunnescenti-nigris, in medio cinereis albo transversim flexuosè lineatis; rectricibus duabus intermediis proximarumque duarum utrinque pogoniis externis cupreo-viridibus; reliquis ad basin nigris, ad apicem albis, in medio præsertim pogonii externi albo nigroque fasciatis.*

Fœm. *Auribus in medio lineâque circum oculum albis; torque pectorali subobsoletâ; suprâ et ad pectus cinereo-brunneus olivaceo tinctus; alis in medio cinereis maculis saturatioribus notatis; remigibus brunneis; ventre anticè brunnescenti-griseo in coccineum posticè transeunte.*

Male.—Face, fore part of the head, ear-coverts, and throat black; chest, back of the neck, back, and upper tail-coverts green; a white crescent separates the green of the chest from the breast, which together with the belly and under tail-coverts is scarlet; wings brownish black, the primaries having their outer edges fringed with white; secondaries and centre of the wings grey, strongly marked with zigzag transverse lines of black; two middle tail-feathers green with bronzy reflections on their outer webs, only the inner webs black; all six are largely tipped with black; the remaining six black at the base and white at the tip, the middle portions of these latter feathers barred with black and white; bill yellow.

Total length about 12 inches, *wing* 6, *tail* 7 $\frac{1}{4}$.

Female.—Bill yellow; centre of the ear-coverts and a small rim round the eye white; the whole of the upper surface and chest greyish brown with a tinge of olive; primaries brown, their outer edges fringed with white; centre of the wings and secondaries grey, faintly speckled with spots of a darker colour; a faint pectoral band of white separates the feathers of the chest from those of the breast, which is light brownish grey on the upper part, gradually passing into scarlet below; two centre tail-feathers dull brown tipped with black, two next on each side black, the remainder are black at the base and white at the tip, the middle portion being white, irregularly blotted with black.

Trogon elegans, Gould, in Proc. of Zool. Soc., 1834, p. 26.—Id. Mon. of Trog., pl. 3.—Gray and Mitch. Gen. of Birds, vol. i. p. 69, *Trogon*, sp. 13.

Trogonurus elegans, Bonap. Consp. Vol. Zygod., p. 14, gen. 2c, 22.

THE beautiful Trogon here figured under the specific title of *elegans* is a native of Mexico, Guatemala, and Honduras, countries rich beyond measure in zoological productions. It is most nearly allied to the bird I have called *ambiguus*, the chief point of difference being in the decided barring of the outer tail-feathers, and in the stronger markings of the wings.

The lengthened tails of many of the Mexican Trogons form a feature which distinguishes them from all

the other species of the American continent ; and in this particular the *Trogon elegans* is especially conspicuous, inasmuch as its tail is longer than that of any other of the smaller species of the genus.

The female is readily distinguished from the male by her more obscure and less gay colouring.

The principal part of the foregoing appeared in the first edition of this Monograph ; during the thirty years which have since elapsed so little information has been acquired respecting this bird that even the following brief note obligingly sent to me by Mr. Salvin must be regarded with interest.

“ You ask me about *Trogon elegans* ; unfortunately I never met with the species in Guatemala, though I believe it does occur occasionally in collections from Vera Paz. A little to the southward, in the neighbouring State of Honduras, the bird would appear to be more abundant, as Mr. George Cavendish Taylor, in his remarks on the birds observed during his journey across that country, states that he saw several of these birds in the forest, on the plain of Comayagua, and that he had no reason to suppose they were otherwise than common (Ibis, 1860, p. 117). The only skin I possess is that of a male which was obtained by the late Mr. Bridges in the woods bordering on Virgin Bay, Lake of Nicaragua. Southward of this I know of no recorded instance of the occurrence of this Trogon.”

The Plate represents a male and a female, of the size of life. The plant is the *Bignonia radicans*.

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TROGON SURUCUA.

TROGON SURUCUA.

Surucua Trogon.

SPECIFIC CHARACTER.

Mas. *Vertice, cervice pectoreque iridescenti-cæruleis; rectricibus intermediis duabus cærulescenti-viridibus, duabus proximis utrinque pogoniis externis cærulescenti-viridibus internis nigris, harum omnium apicibus nigris, reliquis dimidio basali nigro apicali albo; remigibus nigrescenti-brunneis, albo ad pogonia externa fimbriatis.*

Fœm. *Fuliginoso-cinerea; alis brunnescenti-nigris, remigibus albo fimbriatis.*

Male.—Crown of the head, back of the neck, and chest changeable green and violet in some specimens, and almost pure blue in others; throat and face black; back and upper tail-coverts deep changeable golden green, inclining to blue on the rump; the two middle tail-feathers bluish green, the two next on each side with their outer webs only bluish green, the inner black, the whole six tipped with black; the three outer feathers on each side have their basal half black, the remainder white; primaries blackish brown, bordered with white on their exterior edges; secondaries and upper part of the wing freckled with markings of black and white; centre of the abdomen and under tail-coverts crimson; bill olive; irides reddish brown; eyelash orange; feet dark brown.

Total length $10\frac{1}{2}$ inches, *bill* 1, *wing* 5, *tail* $5\frac{1}{2}$.

Female.—Head, neck, chest, back, and rump sooty grey; lower part of the belly and under tail-coverts light crimson; wings brownish black; primaries edged with white; the secondaries and upper part of the wings transversely rayed with greyish white; six centre tail-feathers brownish grey tipped with black, three outer feathers on each side brownish grey margined on their exterior edges and partly so on their inner ones with white; bill olive.

Surucuá, Azar. Apunt. Hist. Nat. Paxar. Parag., tom. ii. p. 373. no. 270.

Trogon surucura, Vieill. Nouv. Diet. d'Hist. Nat., tom. viii. p. 322.—Gould, Mon. of Trog., pl. 15.—Gray and Mitch. Gen. of Birds, vol. iii. App. p. 4, app. to p. 69.—Bonap. Consp. Gen. Av., tom. i. p. 148, *Harpactes*, sp. 2.—v. Pelz. Orn. Bras., p. 19.

Trogon leucurus, Swains. Two Cent. and a Quart., p. 331.—Gray and Mitch. Gen. of Birds, vol. i. p. 70, *Trogon*, sp. 15.—Bonap. Consp. Gen. Av., tom. i. p. 149, *Trogon*, sp. 15.

——— *curucura*, Gray and Mitch. Gen. of Birds, vol. i. p. 69, *Trogon*, sp. 2.

Curucujus surucua, Bonap. Consp. Vol. Zygod., p. 14. gen. 2b. 15.

Trogon surucua, Hartl. Ind. Azar., p. 17.—Burm. Syst. Uebers. Th. Bras., tom. ii. p. 274.

Hapalophorus surucua, Cab. et Heine, Mus. Hein., Theil iv. p. 199.

As I have not the slightest doubt that the bird here represented is the *Surucuá* of Azara, I am induced to insert the following nearly literal translation of the account he has given of the species in his celebrated work on the natural productions of Paraguay:—After informing us that *Surucuá* is its native name in that country, he proceeds to state that “it is not common, and does not quit the largest woods, but generally

remains on the upper portions of the trees without descending to the lower branches or to the earth: it sits a long time motionless, watching for insects which may pass within its reach, and which it seizes with adroitness; it is not gregarious, but dwells either in solitude or in pairs; its flight, which is rapid and performed in vertical undulations, is not prolonged. These birds are so tame as to admit of a near approach; I have seen them killed with a stick. They do not migrate, and they are never heard except in the love season; their note then consists but of the frequent repetition of the syllables *pio* in a strong, sonorous, and melancholy voice: the male and female answer each other. They form their nests on the trees by digging into the lower part of the nest of a species of ant known by the name of *cupiy*, until they have made a cavity sufficiently large, in which the female deposits in the month of September two white eggs according to some, and four according to others. I have seen the male clinging to a tree, after the manner of the Woodpeckers, and occupied in digging a nest with his beak, while the female remained tranquil on a neighbouring tree."

Azara states that he has only seen this bird from Paraguay; I have, however, received it from the southern parts of Brazil; and the late John Natterer obtained examples at Mattodentro in November and December, and at Ypanema in February, May, June, July, and August; I am inclined, therefore, to believe that it has a more extensive range than is generally supposed.

The Plate represents the two sexes, of the size of life. The Plant is the *Chamædorea Ernesti-Augusti* (fœm.).

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TROGON AURANTIUS, Spix

TROGON AURANTIUS, Spix.

Orange-breasted Trogon.

SPECIFIC CHARACTER.

Mas. *Vertice pectoreque violaceo-cæruleis nitore viridi, gutture nigrescente; dorso et uropygio intensè viridibus, hóc cærulescente; abdomine medio crissoque splendidè aurantiacis; rectricibus caudæ duabus intermediis intensè viridibus, utrisque duabus proximis nigrescenti-fuscis extùs viridi lavatis; tribus externis versus apicem albis.*

Fœm. *Capite, corpore suprà, gutture, pectore lateribusque nigrescenti-cinereis; caudâ nigrescenti-cinereâ, rectricibus intermediis ad apicem nigerrimis, tribus externis albo extùs marginatis apicibusque albis.*

Male.—Crown of the head and chest violet-blue, with green reflections in some specimens; throat black; back and rump rich dark green inclining to blue on the latter; wings black, with the centre very finely striated with greyish white, and the primaries margined on the outer edges with white; flanks grey; centre of the abdomen and under tail-coverts rich orange yellow; two centre tail-feathers rich green; the two next on each side blackish brown, tinged with green on their outer webs, and all six tipped with black; the three lateral feathers on each side blackish brown at the base, and pure white for the remainder of their length; bill bluish horn-colour; feet purplish lead-colour.

Total length $10\frac{1}{2}$ inches, *bill* 1, *wing* 5, *tail* 6.

Female.—Head, all the upper surface, throat, chest, flanks, and tail grey, the middle feathers of the latter tipped with jet-black, and the three lateral ones on each side margined on their external webs and tipped with white; centre of the wing striated with white; centre of the abdomen and under tail-coverts orange yellow; bill dark horn-colour, becoming lighter at the point; feet purplish lead-colour.

Trogon aurantius, Spix, Av. Bras., tom. i. p. 47, tab. xxxvi.—Steph. Cont. of Shaw's Gen. Zool., vol. xiv. part 1, p. 219.—Temm. Pl. Col., gen. Courouc., sp. 13.—Gould, Mon. of Trog., pl. 14.—Gray and Mitch. Gen. of Birds, vol. i. p. 69, *Trogon*, sp. 7.—Id. List of Spec. of Birds in Coll. Brit. Mus., part ii. sect. i., *Fissirostres*, p. 42.—Bonap. Consp. Gen. Av., tom. i. p. 149, *Trogon*, sp. 6.—Burm. Syst. Uebers. Th. Bras., tom. ii. p. 279.—v. Pelz. Sitz. Wien. Akad. Wissensch., tom. xx. p. 505.—Id. Orn. Bras., p. 20.—Selater, Cat. of Coll. of Amer. Birds, p. 276.

——— *chrysogaster*, Swains. Two Cent. and a Quart., p. 330.—Id. Class. of Birds, vol. ii. p. 337.

Aganus aurantius, Cab. et Heine, Mus. Hein., Theil iv. p. 192.

My late friend John Natterer informed me, when in London some thirty years ago, that this beautiful species, the *Trogon aurantius* of Spix, was not uncommon in the woods near Rio de Janeiro; we learn from August von Pelzel's "Ornithologie Brasiliens, Resultate von Johann Natterer's Reisen in den Jahren 1817 bis 1835,"

that examples were obtained by Natterer in Minas Geraes, and at Monjolinha; and I have myself received it from other parts of Brazil: that country would therefore appear to constitute its natural habitat. Burmeister, who obtained a male near New Freiburg, states that this species is not so abundant as the *Trogon viridis*, that the Prince of Wied did not meet with it, and that consequently it must be regarded as a Brazilian bird. Much difference exists in the colour of the upper surface of different specimens, particularly of the head and throat, some having those parts of a rich violet purple, while in others they are of a rich metallic green; but as I find no variation in their relative measurements, I am led to regard them as merely varieties of the same species. The plumage of the young males resembles that of the female; but their central tail-feathers are at all times glossed with green on the upper surface: still they are apt to puzzle the ornithologist, unless he has made himself acquainted with the peculiar variations in colour to which the immature birds of this family are subject from the circumstance of the feathers of the body frequently undergoing a change before those of the wings and tail. I have a specimen in my collection, in which an almost perfect moult has taken place in the plumage of the body, its tint being nearly as rich as that of the adult: this specimen is also rendered remarkable by the centre of the wing having assumed the minute markings of maturity, while the tail resembles that of the female, in which the white only occupies the outer webs and extreme tips of the three lateral feathers.

The Plate represents a male and female, of the natural size. The plant is the *Passiflora tinifolia*.

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TROGON VIRIDIS, Linn

J. Gould & H.C. Richter, del et lith

Wauer imp.

TROGON VIRIDIS, *Linn.*

Black-winged Trogon.

SPECIFIC CHARACTER.

Mas. *Capite suprà guttureque violaceo-purpureis.*

Fœm. *Suprà et ad pectus saturatè plumbeo-cinereus.*

Male.—Bill bluish grey ; crown of the head and chest rich violet purple ; back and rump rich metallic green ; upper tail-coverts blue ; two middle tail-feathers green with a tinge of purple, two next on each side black on the inner web, and greenish purple on the outer ; the three outer feathers on each side black at their base and white at their tips ; wings black ; abdomen and under tail-coverts rich orange.

Total length from $10\frac{1}{2}$ to $11\frac{1}{2}$ inches, *bill* $1\frac{1}{8}$, *wing* $5\frac{1}{4}$ to $5\frac{1}{2}$, *tail* $6\frac{1}{2}$.

Female.—Head, chest, and all the upper surface deep leaden grey ; wings brownish black ; secondaries and scapularies transversely striated with fine lines of white ; abdomen and under tail-coverts orange ; three outer tail-feathers on each side brownish black, tipped and barred with white.

Trogon Cayanensis cinereus, Briss. Orn., tom. iv. p. 165, pl. xvi. fig. 1.

Couroucou de Cayenne, Buff. Pl. Enl. 195.

Trogon strigilatus, Linn. Syst. Nat., tom. i. p. 167.

——— *viridis*, Linn. Syst. Nat., tom. i. p. 167.—Vieill. Ency. Méth. Orn., part iii. p. 1361.—

Less. Traité d'Orn., p. 119.—Gray and Mitch. Gen. of Birds, vol. i. p. 69, *Trogon*, sp. 3.—

Burm. Syst. Uebers. Th. Bras., tom. ii. p. 277.—v. Pelz. Orn. Bras., p. 20.

Couroucou à ventre jaune, Levaill. Hist. Nat. Promér. et Guêp., iii.—Courouc. et Tourac., p. 8, pls. 3 & 4.

——— *albane*, Levaill. ibid., p. 10, pl. 5.

Trogon leverianus, Shaw, Mus. Lever., p. 175.—Vieill. Ency. Méth. Orn., pt. iii. p. 1360.—Gray and Mitch. Gen. of Birds, vol. i. p. 70, *Trogon*, sp. 21.

——— *violaceus*, Spix, Av. Bras., tom. i. p. 50.—Wied, Beitr. Nat. Gesch. Bras., tom. iv. p. 297.

——— *melanopterus*, Swains. Two Cent. and a Quart., p. 332.—Id. Class. of Birds, vol. ii. p. 337.—Gould, Mon. of Trog., pls. 10 & 11.

“*Trogon albiventer*, Cuv.,” Bonap. Consp. Gen. Av., tom. i. p. 148, in syn. *Trogon*, sp. 3.

Aganus viridis, Cab. et Heine, Mus. Hein., Theil iv. p. 196.

THIS is one of the Trogons most frequently sent to Europe, no collection of any extent being destitute of examples. It ranges widely over the South-American continent, and is also found in the Island of Trinidad. While writing I have before me specimens from the latter locality, from Demerara, Cayenne, the river Napo

and Bahia, and the neighbourhood of Rio de Janeiro. John Natterer found it, among other places, at Mato Grosso in October, on the river Xié in June, on the Rio Negro in July, and the Rio Salimoes in December.

It is now very generally admitted by ornithologists that Linnæus's specific name of *viridis* must be hereafter retained for this bird. Swainson's term *melanopterus* would have been a more appropriate appellation; but this term, as well as that of *violaceus* assigned to it by Spix, must give place to the prior designation, however inappropriate it may be. Much confusion has hitherto existed with regard to the synonymy of this species, a confusion mainly caused by the great difference in the colouring of the sexes, and the numerous changes which take place in the plumage of the young males during the first two years of their existence. At first the secondaries and wings are crossed with narrow lines of white, and the tails are barred with white on a black ground. When these tail-feathers are thrown off they are not all shed simultaneously; and thus it frequently happens that two of the outer feathers on one side resemble those borne by the older birds, and present a strong contrast to the unshed barred plumes of the opposite side. The upper surface, too, of the young males is frequently clothed with mingled green and grey feathers, giving them a totally different appearance from the adults of both sexes.

The following remarks on *Trogon viridis* were given in the first edition of this Monograph, and may be repeated here:—This species gives a preference to dense and impenetrable forests, and like the other members of its race is solitary and unsocial in its habits. The male may be distinguished from all others by its large size and by the rich violet colour of its head and chest. The female is more sombre in her colouring, those parts being of a dusky grey which in the male are resplendent green and violet. Burmeister states that this is the commonest species of Trogon inhabiting the Brazilian forests, where it is mostly seen sitting solitary on branches of a moderate height from the ground, and, not being shy, will admit of near approach. Its flight is soft and slow, and extends to but a short distance before it settles again. Like the Parrots it is considered good food by the Brazilians. In the stomachs of some specimens which M. Natterer examined were found the remains of fruit, and an insect nearly allied to *Mantis*.

“This beautiful Trogon” says Prince Maximilian of Wied, “is perhaps the commonest of all the birds inhabiting the parts of Brazil visited by me. It is to be found south in the Serra dos Orgãos near Rio, near Cabo Frio in the Serra de Inuá, where it is very numerous, and proceeds as far north as Guiana; but Azara did not notice it as occurring in Paraguay. It dwells in the lower as well as in the mountainous forests, but especially in those near the coast. Its cry, which may be heard everywhere, is a rather short, often-repeated monosyllabic whistle, gradually descending from a high to a lower tone, and appears to me among bird-voices to be most like the call of the female Turkey (*Meleagris gallopavo*). The bird is so little shy or so simple that, as Azara truthfully remarks, it may be killed with a stick. It is mostly seen sitting motionless on a naked moderately high branch, with its head drawn in between the shoulders, and its tail hanging straight down. On uttering its easily imitated cry it will come like our Cuckoo and alight on a branch near at hand; its flight is noiseless and owl-like. Everywhere abundant, it appears to be more numerous in the majestic forests near the coasts than in the Catinga or Carasco bushes of the hot and dry interior. In the Sertong or the inner parts of the province of Bahia it is called *Pompéo*, in Minas Geraes *Capitao do mato*; but in most of the other provinces all the Trogons are called *Curucua*: it is the *Nit-not-nop* of the Boto-cudos, and, according to Waterton, is termed *Bochlora* in Guiana. Should the traveller in those uncivilized countries be short of food, the flesh of this bird will prove not unacceptable.”

The Plate represents an adult male and a female, of the natural size. The plant is the *Pandanus candelabrum*.

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TROCTES MASSENÆ.

J. Gould & H.C. Richter, del et lith.

Walter Ings.

TROCTES MASSENÆ.

Massena's Trogon.

SPECIFIC CHARACTER

Mas. *Staturâ magnâ ; vertice, corpore suprâ pectoreque nitidè viridibus ; loris, plumis auricularibus et gutture nigris ; alâ mediâ cinereâ nigro delicatè striatâ, primariis extus albo marginatis ; rectricibus caudæ duabus intermediis purpureo-viridibus, ad apicem nigris ; reliquis nigris ; pectore corporeque subtùs coccineis.*

Fœm. *Vertice, corpore suprâ, gutture, pectore abdomineque superiore intensè cæruleo-cinereis ; abdomine imo, lateribus crissoque coccineis.*

Male.—Crown of the head, all the upper surface, and chest fine green ; lores, ear-coverts, and throat black, gradually passing into the green ; centre of the wing finely pencilled with black on a grey ground ; primaries black, margined on their external webs with white ; two centre tail-feathers purplish green, tipped with black, the remainder wholly black ; breast and under surface rich scarlet ; bill yellow ; feet greyish olive.

Total length 14 inches, *bill* $1\frac{1}{4}$, *wing* $7\frac{1}{2}$, *tail* 7.

Female.—Crown of the head, the upper surface, throat, chest, and upper half of the belly dark bluish grey ; lower part of the belly, flanks, and under tail-coverts scarlet ; wings and tail black, the secondaries and lesser wing-coverts powdered with extremely fine spots of grey ; upper mandible black ; lower mandible yellow ; feet dark brown.

Trogon Massena, Gould, Mon. of Trog., pl. 16.—Gray and Mitch. Gen. of Birds, vol. i. p. 70, *Trogon*, sp. 19.—Gray, List of Spec. of Birds in Coll. Brit. Mus., part ii. sect. i. *Fissirostres*, p. 40.—Bonap. Consp. Gen. Av., tom. i. p. 149, *Trogon*, sp. 18.—Sclat. Proc. of Zool. Soc., 1858, p. 96, & 1859, p. 387.—Sclat. and Salv. Ibis, 1859, p. 132.—Salv. Ibis, 1861, p. 146.—Sclat. Cat. of Coll. of Amer. Birds, p. 277.—Cab. Journ. für Orn., 1862, p. 174.—Sclat. and Salv. Proc. of Zool. Soc., 1864, p. 364.—Salv. in Proc. of Zool. Soc., 1867, p. 151.

Curucujus Massena, Bonap. Consp. Vol. Zygod., p. 14. gen. 2 b. 16.

Troctes Massenæ, Cab. et Heine, Mus. Hein., Theil iv. p. 204.

ORNITHOLOGISTS will doubtless always be divided in opinion with regard to the value of the minute subdivisions which are found to exist in all large families of birds ; on observing that the members of each of these subdivisions are characterized by some peculiar feature, some will be inclined to raise them to the rank of genera, and to assign to them a distinctive designation, while others will be content with merely indicating their existence. With few exceptions, I have kept the American Trogons under two generic appellations—*Pharomacrus* and *Trogon* : one of the exceptions is *Troctes*, of which the present bird may be considered a typical example, as it certainly is the largest species known, its size being nearly equal to that of the greatest of the Train-bearers, *Pharomacri*. It is a very robust bird, and is remarkable for the total

absence of the white pectoral crescent, a character common to so many members of its family; I may remark, too, that were its habits and economy better known, we should doubtless find that its very powerful bill is fitted for some special purpose.

The *Troctes Massenæ* is very common in Guatemala, Costa Rica, and probably in all the other countries southward to the Isthmus of Panama. Specimens from the latter country are smaller than those obtained in more northern localities.

The following particulars respecting this species have been kindly furnished me by Mr. Osbert Salvin, a gentleman who is so intimately acquainted with the ornithology of Central America that all that flows from his pen must be considered of value :—" *Trogon Massenæ*, though abundant in many parts of the vast forests which clothe the warmer portions of the eastern side of the great Central-American Isthmus from Mexico to Panama, does not appear to occur in similar tracts on the western or Pacific side of those countries; nor is it, that I am aware of, to be found in the more broken and thinner forests of the central portion of the Isthmus. Though originally described as occurring in Mexico, it does not seem to be very abundant there, as the only recent records of its capture in that country are given by Mr. Sclater, who states that M. Boucard obtained specimens at Playa Vicente, and that others passed through the hands of the MM. Verreaux (*cf.* P. Z. S. 1858, p. 96, & 1859, p. 387). In Guatemala, Massena's Trogon is very abundant in the province of Vera Paz; and during my excursions to the lowland forests in 1860, and again in 1862, when Mr. Godman and I were together, I had frequent opportunities of observing it. As I said before, it is a bird which inhabits the densest forest, never emerging into the sunlight or the brushwood of an old clearing. It usually flies amongst the lower branches of the forest trees, but still far from the ground. Its habits are quick and spasmodic while in motion, and the very reverse when perched and at rest. A bird is observed to fly past overhead; it alights on a bough, and in a moment assumes an attitude that would lead one to suppose it had not stirred for an hour. When thus perched, the glittering green of the upper plumage and breast is inconspicuous, but the brilliant red of the under parts is an object of mark against the dark foliage of the trees. Its cries are various, but harsh and discordant, none of them being so soft as the call-note of the Quetzal. Its food consists principally of ripe fruits, which are plucked whilst the bird is on the wing. Occasionally a caterpillar is added to its repast. The first specimen I saw was in the mountains of Rashché, at an elevation of about 2500 feet above the sea; but at Choctum, which is only half that elevation, it occurred in numbers; not only did we obtain examples ourselves, but every collection made by natives was well stocked with them. Specimens were also procured for us near Telemán, a village situated just where the river Polochic becomes navigable for canoes. Mr. Leyland found *Trogon Massenæ* at Omoa and San Pedro, and in the notes referring to his collection (P. Z. S. 1859, p. 53) he states that 'these birds are met with in pairs; they are very active, making a chattering noise, varied occasionally by a great outcry.' In Costa Rica it appears to be equally abundant; M. Carmiol has recently forwarded us specimens from a place called Valza; and the collection of the Smithsonian Institution, at Washington, contains a plentiful supply from the same sources. A little further southwards, Enrique Arcé found it in Veragua, and has sent us skins from the Cordillera of Tolé and Santiago de Veraguas, whilst from the Panama railway line we have had forwarded to us numerous examples, by that indefatigable naturalist Mr. James M'Leannan, the 'track-master' of Lion Hill Station; the forest surrounding his house seems to be full of these birds. The most southern recorded locality for the occurrence of *Trogon Massenæ* is the river Truando and the delta of the Atrato, where examples were obtained by the Messrs. Wood, who accompanied the surveying expedition under Lieut. Michler, as recorded by Mr. Cassin in the Proceedings of the Academy of Natural Sciences of Philadelphia, 1860, p. 135."

The Plate represents the two sexes, of the size of life.

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HARPACTES HODGSONI, Gould.

J. Gould and H. C. Richter, del. & lith.

I. Walker, imp.

HARPACTES HODGSONI, *Gould.*

Hodgson's Trogon.

SPECIFIC CHARACTER.

Mas. *Capite, collo, pectore corporeque subtùs intensè sanguineis.*

Fœm. *Capite, collo, pectore corporeque superiore cinnamomeo-brunneis.*

Male.—Head, neck, and breast deep blood-red, separated from the rich scarlet of the under surface by a crescentic mark of white; back and upper tail-coverts cinnamon-brown, brightest on the rump; wing-coverts and tertiaries striated with fine wavy lines of black and white; primaries black, margined on their outer webs with white; two centre tail-feathers rich chestnut-brown, tipped with black; the next on each side black, with two thirds, from the base, of the outer web, and a fine line down the shaft on the inner web, rich chestnut-brown; the next on each side black, with the basal half of the outer web rich chestnut-brown; the three lateral feathers on each side black, largely tipped with white, which extends some length down the outer web; “bill deep smalt-blue, becoming black along the culmen and at the tip; irides chestnut-brown; orbital skin deep lavender-blue; legs and feet pale lavender” (Jerdon).

Total length $13\frac{1}{2}$ inches, *wing* $5\frac{1}{2}$, *bill* $\frac{3}{4}$, *tail* 8.

Female.—Head, neck, breast, and upper surface cinnamon-brown, palest on the rump and upper tail-coverts; under surface pale crimson, separated from the cinnamon of the throat, as in the male, by a narrow crescent of white; undulations on the wing black and brown instead of black and white.

Trogon Hodgsonii, Gould, Mon. of Trog., pl. 34.

Harpactes Hodgsonii, Gould, Mon. of Trog., Syn. Spec. *Harpactes*, sp. 6.—McClell. in Proc. Zool. Soc., part vii. p. 166.—Gray and Mitch. Gen. of Birds, vol. i. p. 71, *Harpactes*, sp. 3.—Gray, Cat. of Spec., and Draw. of Mamm. and Birds presented to Brit. Mus. by B. H. Hodgson, Esq., p. 56.—Blyth, Cat. of Birds in Mus. Asiat. Soc. Calcutta, p. 80.—Bonap. Consp. Gen. Av. tom. i. p. 151, *Harpactes*, sp. 3.—Horsf. and Moore, Cat. of Birds in Mus. East Ind. Comp., vol. ii. p. 713.

————— *Hodgsoni*, Jerd. Birds of India, vol. i. p. 202.—Beav. in Ibis, 1865, p. 407.—Blyth, in Ibis, 1866, p. 342.

Trogon (Harpactes) Hodgsonii, Gould, Mon. of Trog., List of Plates, sp. 34.

Harpactes erythrocephalus, Gray, List of Spec. of Birds in Brit. Mus., part ii. sect. i. *Fissirostres*, p. 45.—Blyth, Cat. of Birds in Mus. Asiat. Soc. Calcutta, app. p. 322.

Pyrotrogon Hodgsoni, Bonap. Consp. Vol. Zygod., p. 14. gen. 5e. 39.—Cab. et Heine, Mus. Hein., Theil iv. p. 160.

“*Trogon dilectus*, F. B. Hamilton's MSS., vol. i. p. 63,” Horsf. and Moore, Cat. of Birds in Mus. East Ind. Comp., vol. ii. p. 713.

Suda sohaghin, Bengalese (male), Dr. Hamilton.

Hummesha Peeara (“always thirsty”), Hindoos (male), Hamilton.

Cuchecuea, Bengalese (female), Hamilton.

Sakvor pho, Lepchas, Jerdon.

“THIS handsome Trogon,” says Mr. Jerdon, “is found in the Himalayas, from Nepaul eastward, in Assam, Sylhet, Arrakan, and Tenasserim. It prefers hilly places at from 2000 to 4500 feet. At Darjeeling I found it chiefly at about 4000 feet, frequenting darkly shaded valleys and flying from tree to tree at no great elevation, or a few of them together, keeping near the same spot, making sallies every now and then, and seizing insects on the wing. It feeds on Coleoptera chiefly. Tickell, who lately observed it on the Tenasserim hills, about 3000 feet and upwards, says that it flies in small troops, is active and vociferous in the morning, solitary and quiet during the heat of the day. I had the eggs of the Trogon brought me at Darjeeling: they were said to have been taken from a hole in a tree; and were two in number, white and somewhat round. There was no nest, it was stated—only some soft scrapings of decayed wood.” (Birds of India, vol. i. p. 203.) Capt. Beavan found it among heavy timber trees in the valley of Little Runjeet river, Darjeeling.

In naming the present species after B. H. Hodgson, Esq., I was actuated by a desire to pay a just compliment to a gentleman who, besides diligently fulfilling his official duties as British President in Nepaul, laboured with the greatest assiduity and with the richest result, not only in the field of natural but in many other departments of literature and science.

The Plate represents the two sexes, of the natural size. The plant is the *Benthamia fragifera*.

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HARPACTES ARDENS.

HARPACTES ARDENS.

Rosy-breasted Trogon.

SPECIFIC CHARACTER.

Mas. *Vertice, nuchâ plumisque auricularibus intensè sanguineo-rubris ; pectore rosaceo.*

Fœm. *Vertice genisque intensè fuscis ; pectore et abdomine pallidè ochraceo-fuscis.*

Male.—Head, back of the neck, and ear-coverts dark blood-red, approaching to black on the forehead and ear-coverts ; throat black ; back and upper tail-coverts cinnamon ; wing-coverts and secondaries black, crossed with fine irregular lines of white ; primaries black, margined externally with white ; two centre tail-feathers reddish chestnut, tipped with black ; the two next on each side wholly black ; the three outer ones blackish brown at base, largely tipped with white ; the shafts and a series of tooth-like markings on the inner webs blackish brown ; chest delicate rose-colour, the remainder of the undersurface scarlet ; “bill bright yellow, the base green ; ophthalmic region ultramarine blue ; inside of the mouth yellow ; feet olive-green ; the palms and claws yellow ; irides brown.”

Total length 12 inches, *bill* $1\frac{1}{4}$, *wing* $5\frac{1}{2}$, *tail* 8.

Female.—Crown of the head, cheeks, and upper surface dark cinnamon-brown ; throat clouded with blackish brown ; breast and all the undersurface light sandy-brown, becoming of a yellower hue on the under tail-coverts ; wing-coverts and secondaries blackish brown, crossed with lines of sandy brown ; tail as in the male.

Trogon ardens, Temm. Pl. Col. 404.—Id. Mon. of Trog. in Pl. Col.—Gould, Mon. of Trog., pl. 35.

——— (*Harpactes*) *ardens*, Gould, Mon. of Trog., List of Plates, no. 35.

Harpactes ardens, Gould, Mon. of Trog., Syn. Spec., gen. *Harpactes*, sp. 7.—Gray, List. of Spec. of Birds in Coll. Brit. Mus., part ii. sec. i. *Fissirostres*, p. 44.—Gray and Mitch. Gen. of Birds, vol. i. p. 70, *Harpactes*, sp. 7.—Bonap. Consp. Gen. Av., tom. i. p. 151, *Harpactes*, sp. 7.—Cassin, Unit. States Expl. Exp. Mamm. and Orn., 1858, p. 229.—Gould, Birds of Asia, part xiv. pl. 7.

Pyrotrogon ardens, Bonap. Consp. Vol. Zygod. p. 14, gen. 5, c. 38.—Cab. et Heine, Mus. Hein., Theil iv. p. 159.

Harpactes rodiostrernus, Peale, Zool. Unit. States Expl. Exp., Birds, 1st edit. vol. viii. 1848, p. 166.—Hartl. Wieg. Archiv. tom. viii. pt. 1. p. 112

THE Rosy-breasted Trogon is adorned with so many beautiful markings, of which the brilliant colouring of its bill and the extremely delicate rosy hue of its breast are the most conspicuous, that it almost, if not entirely, outvies every other species of its genus. It was first described by M. Temminck, with the specific appellation of *ardens*, from a female in the collection of the Baron Laugier de Chartrouse, of Paris ; this

example, which at that time was unique, had been obtained at Mindanao. Since that period specimens have been brought to England by the late Hugh Cuming, from Manilla; I myself have received several fine examples from other parts of the Philippine Islands, and more recently still I have had the opportunity of examining specimens in the Museum at Washington, which had been obtained by the United States Exploring Expedition in the Island of Mindanao—the locality whence came Baron Langier's specimen; but the species is still comparatively rare in the cabinets of Europe.

The researches of the American naturalists enable me to give a more correct representation of this beautiful bird than I could when the first edition of this Monograph was published, they having carefully noted the colouring of the soft parts. The information respecting it is still, however, extremely meagre, the following short note, transcribed from the 'Mammalogy and Ornithology of the United States Exploring Expedition, 1858,' being all that has been recorded:—"Both Dr. Pickering and Mr. Peale mention the occurrence of this fine species on the Island of Mindanao, one of the Philippines. The latter remarks, 'Our specimen was killed on the 31st of January, near Sambuanga, in the Island of Mindanao. It sits crosswise on the small branches of trees and bushes, and is very active in taking insects on the wing. The clear sunlight, at three o'clock in the afternoon, did not appear to incommode it or others observed at the same time.'"

The Plate represents two sexes, of the size of life. The plant is the *Hoya cinnamomifolia*.

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HARPACTES KASUMBA.

HARPACTES KASUMBA.

Kasumba Trogon.

SPECIFIC CHARACTER.

Mas. *Vertice, gutture pectoreque nigris, hœc posticè torque albo; abdomine et strigâ inde ductâ nuchamque cingente coccineis.*

Fœm. *Magis obscura; capite guttureque saturatè grisescenti-brunneis; pectore arenaceo-brunneo.*

Male.—Head, throat, and chest jet-black; breast, abdomen, and under tail-coverts deep rose-red, separated from the black of the chest by a crescentic band of white; from below the eye round the back of the neck a narrow band of red; back and upper tail-coverts yellowish brown; wings black, the coverts and tertiaries transversely rayed with fine irregular lines of white, and the shafts of the primaries white at the base; two middle tail-feathers chestnut-brown, tipped with black; the two rest on each side wholly black, the remainder black at the base, and white for the rest of their length, with dark shafts; orbits light violet-blue, becoming of a more fleshy hue near the eyes; bill blue; gape light violet-blue; irides dark brown; feet brown.

Total length about 12 inches, *bill* 1, *wing* $6\frac{1}{2}$, *tail* $6\frac{1}{2}$.

Female.—Head and throat greyish brown; white band on the breast much less conspicuous, under surface sandy brown; markings of the wings bolder, and of a sandy hue, instead of pure white.

Trogon kasumba, Raffl. Linn. Trans. vol. xiii. p. 282.

——— *fasciatus*, Temm. Pl. Col. 321.—Id. Mon. of Trog. in Pl. Col.—Less. Traité d'Orn. p. 121.

——— *Temminckii*, Gould, in Proc. of Zool. Soc., part iii. 1835, p. 29.—Id. Mon. of Trog. pl. 29.

——— *flagrans*, Kuhl, Tijdsch. Nat. Gesch. 1835, p. 336.

Harpactes kasumba, Blyth, Cat. of Birds in Mus. Asiat. Soc. Calcutta, p. 80.—Gould, Birds of Asia, part viii. pl. 6.—Horsf. and Moore, Cat. of Birds in Mus. East Ind. Comp., vol. ii. p. 715.—Sclat. in Proc. Zool. Soc., part xxvii. 1859, p. 460, and 1863, p. 213.

——— *Temminckii*, Swains. Class. of Birds, vol. ii. p. 337.—Gould, Mon. of Trog., syn. spec. *Harpactes*, sp. 1.—Gray, List of Birds in Brit. Mus., part ii. sec. i. *Fissirostres*, p. 44.—Gray and Mitch. Gen. of Birds, vol. i. p. 71, *Harpactes*, sp. 4, and vol. iii. App. p. 4, app. to p. 71.—Bonap. Consp. Gen. Av., tom. i. p. 151, *Harpactes*, sp. 4.

Trogon (Harpactes) Temminckii, Gould, Mon. of Trog., List of Plates, sp. 29.

“*Trogon Condea*, Cuv.,” Blyth, Cat. of Birds in Mus. Asiat. Soc. Calcutta, p. 80.

Pyrotrogon kasumba, Cab. et Heine, Mus. Hein., Theil. iv. p. 158.

Kasumba of the Sumatrans.

THE countries inhabited by this species are Malacca, Sumatra, and Borneo, from all of which I have specimens in my own collection.

In a letter received from Mr. Wallace in 1856, when he was engaged in exploring the Islands of the

Indian archipelago, that gentleman, writing from Singapore, says, "You will think I have forgotten to write to you about the Trogons; but I have not neglected the subject. I remained two months on this island, where the jungle is now only to be found in small patches, but did not meet with any, and I doubt if there be a Trogon in the island. At Malacca, however, whence I have just returned, I met with them. I think there are four species; but as I only obtained males of three, I cannot be certain. Two are of an ordinary size, and two are smaller. One of the larger I take to be *Harpactes Kasumba*: I send you a coloured sketch of the soft parts that you may make a correct drawing for your work. The habits and economy of the Indian Trogons assimilate closely to those of the American."

As nothing can exceed the beauty of this noble bird, the appearance the males must present in their native forests cannot fail to be attractive in the extreme, especially when the rich scarlet colouring of their breasts is contrasted with the equally brilliant green of the luxuriant vegetation of Malacca.

The sexes present a marked difference in the colouring of their plumage, as will be seen on reference to the opposite Plate, where they are accurately depicted, of the size of life.

In Mr. Sclater's notes to the "Observations on the Birds of South-eastern Borneo, by the late James Mottley, Esq.," published in the volume of the Proceedings of the Zoological Society of London for 1863, it is mentioned that specimens were obtained at Bangkank, on the Riam Kiwa, and that the species is one of the principal birds of omen of the Dyaks.

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HARPACTES REINWARDTI.

HARPACTES REINWARDTI.

Reinwardt's Trogon.

SPECIFIC CHARACTER.

Mas. *Capite, dorso tectricibusque caudæ superioribus saturatè viridibus; pectore olivaceo-brunneo; ventre flavo, ad latera aurantiaco.*

Male.—Crown of the head, back, wing-, and upper tail-coverts dark shining green; centre of the wing dark green, crossed by numerous narrow wavy lines of dull yellow; primaries greyish black, margined externally with white; six middle tail-feathers dark glossy green; the three lateral feathers on each side of the same hue at the base of the outer web, and greenish slate-colour on the inner, the outer feather margined with white throughout the entire length of its outer web, the next on each side from near the base to the tip, and the third for about half its length from the tip, all three tipped with white; throat pale orange-yellow; across the breast a broad band of yellowish olive-brown; breast and all the under surface rich orange-yellow; bill deep red; orbits cobalt-blue; space between the orbits and bill pea-green; feet orange.

Total length from $12\frac{1}{2}$ to $13\frac{1}{2}$ inches, *bill* $\frac{1}{2}$, *tail* $7\frac{1}{2}$, *wing* $5\frac{1}{2}$.

Female.—Similar in colour; but the green of the head is duller; the throat is pale yellowish white; the band across the breast is greyish brown, without any of the yellow suffusion seen in the male; the orange of the abdomen is much paler; and the wavy lines of yellow on the centre of the wing are broader, paler, and more conspicuous.

Trogon Reinwardti, Temm. Pl. Col. 124.—Id. Mon. of Trog. in Pl. Col.—Less. *Traité d'Orn.*, p. 122.—Gould, Mon. of Trog., pl. 27.

——— *Reinwardtii*, Steph. Cont. of Shaw's Gen. Zool., vol. xiv. part 1, p. 221.

Apaloderma Reinwardii, Swains. Class. of Birds, vol. ii. p. 337.

——— *Reinwardtii*, Gould, Mon. of Trog., syn. spec. *Apaloderma*, sp. 2.

Trogon (Apaloderma) Reinwardtii, Gould, Mon. of Trog., List of Plates, sp. 27.

Harpactes Reinwardtii, Hartl. Verz. Mus. Brem., p. 12.—Gray and Mitch. Gen. of Birds, vol. i. p. 71, *Harpactes*, sp. 9.—Gray, List of Spec. of Birds in Coll. Brit. Mus., pt. ii. sect. i. *Fissirostres*, p. 45.—Bonap. Consp. Gen. Av., tom. i. p. 151, *Harpactes*, sp. 9.

——— *Reinwardtii*, Gould, Birds of Asia, part xvii. pl. 4.

Apalharpactes Reinwardtii, Bonap. Consp. Vol. Zygod. p. 14. gen. 5 *e.* 43.

“*Trogon sulphureus*, Begbie,” Bonap. Consp. Gen. Av. tom. i. p. 151, in syn. *Harpactes*, sp. 9.

Hapalarpactes Reinwardti, Cab. et Heine, Mus. Hein., Theil iv. p. 162.

Trogon Reinwardti, Huxl. in Proc. Zool. Soc. 1867, p. 444.

THE native country of this fine bird is Java, where it was discovered by Professor Reinwardt; and Mr. Wallace informs me it inhabits the western parts of the country, up to an altitude of 6000 feet above the sea.

In the account of the *H. Reinwardti* given in the first edition of this Monograph, I stated that I was indebted to my late valued friend Temminck for an example of the young, a figure of which is given in the accompanying Plate, and, as illustrating the change the bird undergoes between youth and maturity, will not be uninteresting. It will be seen that although, in this immature state, it exhibits a similarity to the adult, particularly in the colours of the back and tail, it differs in the markings of the wings and in the rufous-brown tint of the breast.

The Plate represents a male and a young bird, of the size of life. The Plant is the *Medinilla Javensis*.

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HARPACTES MACKLOTI.

HARPACTES MACKLOTI.

Macklot's Trogon.

SPECIFIC CHARACTER.

Mas. *Similis* HARPACTI REINWARDTI, *sed valdè minor*.

Male.—Head, neck, and a broad band across the chest olive-green; back metallic or shining green; middle and greater wing-coverts, tertiaries, and outer margins of the secondaries crossed with fine lines of golden yellow; tail dark green, tinged with blue; the three outer feathers on each side tipped and externally margined with white; irides blackish brown; naked orbits blue; space posterior to the gape light green; on the lower eyelids a spot of yellowish white.

Total length $10\frac{1}{12}$ inches, *bill* $9\frac{1}{2}$ lines, *wing* 5 inches, *tail*, $6\frac{1}{2}$.

Female.—Similar in colour, but with the transverse stripes on the wings smaller and paler.

Trogon Mackloti, Müll. Tijdschr. Nat. Gesch., 1835, p. 336, tab. 8. fig. 1.

Harpactes Mackloti, Gray and Mitch. Gen. of Birds, vol. iii. App. p. 4.—Bonap. Consp. Gen.

Av., tom. i. p. 151, *Harpactes*, sp. 10.—Gould, Birds of Asia, part xvii. pl. 5.

Apalharpactes Mackloti, Bonap. Consp. Vol. Zygod., p. 17. gen. 5 *e.* 44.

Hapalarpactes Mackloti, Cab. et Heine, Mus. Hein., Theil iv. p. 163.

THE *H. Mackloti* is much inferior in size to the *H. Reinwardti*. By some ornithologists they might be considered races of the same species; but I have never seen races differing in size to such an extent. That they represent each other in the respective islands they inhabit is certain, and that we are right in considering them distinct there can be no doubt.

“I have named this species,” says Dr. Müller, “in memory of my unfortunate friend and companion for many years, Macklot. It is smaller than the *Trogon Reinwardti* of Temminck, but very much resembles it. The chin, the throat, the whole of the belly, and the under tail-coverts are yellow, on a white ground; the remainder of the head and neck, and a broad band across the chest, olive-green; the back has a beautiful metallic lustre of bottle-green, with a large rust-coloured spot on the uropygium. The middle and larger upper wing-coverts, the tertiaries, and the outer margins of the secondaries are adorned with fine transverse golden-yellow stripes; tail dark green, with a steel-blue tint; the six middle feathers equal in length, and one-coloured; the three outer on each side have white terminal points, and each has a white margin along the outer edge; toes and nails red; eyes blackish brown; naked orbits beautiful blue; space immediately behind the angle of the mouth light green; lower eyelids with a yellowish-white spot.

“Total length $10\frac{1}{12}$ in., French measure; tail $5\frac{11}{12}$; the coral-red bill, from the angle of the mouth to the point, $9\frac{1}{2}$ lines long, 7 lines broad at the base; expanse of the wings 1 foot 2 inches and 9 lines.

“The female is much the same as to colour, but has not the rusty-brown spot on the uropygium, and the yellow stripes on her wings are smaller and fainter.

“The bird was found in the woods on the southern side of the mountains of Singallang in Sumatra.”

Thus much only has been written respecting this bird by Dr. Müller, in whose opinion that it is distinct from *H. Reinwardti* I fully concur; as yet, however, I have never met with an example bearing the rusty-brown spot on the uropygium described by him. Can this be a mark of immaturity, and Dr. Müller unconsciously have taken his description from a specimen which had not yet completed its second moult?

The figures are of the size of life. The plant is the *Plectocomia Assamica*.



HARPACTES ORESKIOS.

HARPACTES ORESKIOS.

Mountain Trogon.

SPECIFIC CHARACTER.

Mas. *Capite, gutture pectoreque lutescentibus; ventre aurantiaco in medio, et ad crissum flavo.*

Fœm. *Capite, pectore dorsoque sordidè brunneis; ventre flavo, ad latera subaurantiaco.*

Male.—Crown of the head, throat, and chest greenish yellow; back and upper tail-coverts rich deep chestnut; wings black, their centres rayed with strong bars of white; primaries margined externally with white; two centre tail-feathers rich deep chestnut, crossed at the tip with a narrow band of black, the two next on each side black; three outer feathers black at the base and white at the tip; breast and flanks rich orange, becoming paler on the belly and vent; thighs black; bill black at the tip, yellow at the base; legs and feet flesh-colour.

Total length 10 to $10\frac{3}{4}$ inches, *bill* $\frac{3}{4}$, *wing* $4\frac{3}{4}$, *tail* $6\frac{1}{2}$.

Female.—Head, chest, and all the upper surface dull brown, becoming richer on the lower part of the back and the two middle tail-feathers; the transverse marks on the centre of the wings yellow instead of white, and the under surface yellow, inclining to orange only on the flanks.

Trogon oreskios, Temm. Pl. Col. 181.—Id. Mon. of Trog. in Pl. Col.—Steph. Cont. of Shaw's Gen. Zool., vol. xiv. part 1, p. 220.—Less. Traité d'Orn., p. 121.—Gould, Mon. of Trog., pl. 36.

Harpactes Gouldii, Swains. Class. of Birds, vol. ii. p. 337.

———— *oreskios*, Gould, Mon. Trog., syn. spec. *Harpactes*, sp. 8.—Gray and Mitch. Gen. of Birds, vol. i. p. 71, *Harpactes*, sp. 8.—Gray, List. of Spec. of Birds in Coll. Brit. Mus., part ii. sect. i. *Fissirostres*, p. 45.—Blyth, Cat. of Birds in Mus. Asiat. Soc. Calcutta, p. 80.—Bonap. Consp. Gen. Av., tom. i. p. 151, *Harpactes*, sp. 8.—Horsf. and Moore, Cat. of Birds in Mus. East Ind. Comp., vol. ii. p. 716.—Gould, Birds of Asia, part xvii. pl. 3.

———— *oreskios*?, Wald. in Proc. of Zool. Soc. 1866, p. 538.

Trogon (Harpactes) oreskios, Gould, Mon. Trog., List of Plates, sp. 36.

Oreskios Gouldi, Bonap. Consp. Vol. Zygod., p. 14, gen. 5 d. 41.

Orescius Gouldi, Cab. et Heine, Mus. Hein., Theil iv. p. 161.

THE native country of the *Harpactes oreskios* is Java, where it appears, from the number of skins sent to Europe, to be tolerably common, and where all the specimens in my collection have been obtained. I have never seen the bird from Malasia, Tenasserim, or any portion of the Malay peninsula; but it is stated by Viscount Walden, in the Proceedings of the Zoological Society above referred to, to have been found by Captain Beavan at Kookarit Island, Salween River; his Lordship, however, qualifies this statement with a mark of doubt as to the identity of the bird there observed with the present species. It is to be regretted that neither Sir Thomas Stamford Raffles nor Dr. Horsfield, by both of whom the *Harpactes oreskios* must

have been seen in its native wilds, has given any account of its habits and economy. It is a richly coloured species, and is rendered conspicuously different from all its congeners by the peculiar waxen yellow tint of its head and throat, and by the absence of any naked skin round the eyes. The scarlet tints which predominate in the plumage of many of the other species is replaced in the present one by orange, particularly on the breast and under surface. It must be a very beautiful object in its native woods; but with the departure of life the glory of its plumage disappears, for it is never to be seen in dried skins.

When treating of this species in the 'Planches Coloriées,' Temminck states that science is indebted to MM. Diard and Reinwardt for the first knowledge of its existence; and Kuhl informs us that it inhabits woods and mountains, and subsists on insects.

The sexes offer the usual differences, the female being less brilliant, and having the wings barred with yellow and brown instead of black and white.

The figures represent the two sexes, of the size of life. The plant is the *Hoya* (*Otostemma*) *lacunosa*.

